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ABSTRACT

In an attempt to test the extent to which attitude change occurs as a function of social role, data was collected on two occasions occuring five years apart (1969 and 1974). Subjects were 72 persons aged 17-19 years old in their last year at high school. They completed the author's modification to the Wilson-Patterson Conservatism Scale in 1969 just prior to high school graduation. Five years later the modified C-scale was readministered. By this time the subjects had left school, some were married, others had travelled overseas, some were involved in political movements, others were continuing education. A 1969-1974 Conservatism Scale discrepancy score was calculated for each respondent. Discrepancy scores were then entered in a regression equation where respondent's "social roles" were the independent variables. From the study results, it appears that the post high school years (early adulthood) are a time when attitudes are shaped by social roles and experiences which accompany each role. The first section of this paper presents background information. In the second section, describing the study, the results are interpreted within the framework of a model which involves a distinction between changes occurring because of developmental events in contrast to historical time and historical events. (Author/SH)

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TRANSITION FROM CHILDHOOD TO ADULTHOOD: A LONGITUDINAL STUDY OF ATTITUDE CHANGE OVER FOUR YEARS

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INTRODUCTION

It is axiomatic that adult education involves adults. Yet, despite the fact education has been defined, there have been few attempts to study the nature of adulthood. Thus, the purpose of this study was to examine psychological changes that accompany transition from pre-adulthood to adulthood. A concomitant aim was to ascertain the extent to which occupancy of different social roles was related to some psychological changes that accompany transition to adulthood. To accomplish the goals of the analysis it was necessary to conduct a longitudinal study which involved the collection of data on two occasions four years apart.

Who is an adult? Most societies confront this question to change the age of consent, the age for conscription into the armed forces, the legal drinking age and matters such as the age a person can marry without parental permission. Many people have drawn attention to the fact that in some countries a person can be conscripted into the army at fifteen but cannot vote until he is twenty. However, all this illustrates for adult education is the fact that any definition which relies on age is bound to be useless. For that matter age is not a good criteria for deciding upon who will marry without consent, buy alcohol, execute legal documents or operate a motor vehicle.

Thus attempts to define "adult" for adult education usually refrain from reference to chronological age and invoke some notion of psychological maturity and social role. "Psychological maturity" is culture bound, subject to the vagaries of time and has not really helped educators define adulthood. It is simply too difficult to measure maturity. Thus most definitions invoke some notion of <u>social role</u>.

Defining Role

Social role has been defined in many ways. Thomas (30) says there is probably more disparity in the way "role" is defined than in the many and varied definitions of "personality." However, if there is a common definition it is that "role is a set of prescriptions defining what the behaviour of the position member should be." (30 :711). Thomas also regards the definition provided by Parson's (21 :23) as exemplary: "The role is that organised sector of an actor's orientation which constitutes and defines his participation in an interacting process. It involves a set of complementary expectations concerning his own actions and those of others with whom he interacts."

The referents in concepts of role are always persons and behaviours. There are many intersections in the person—behaviour matrix. Many definitions of role refer only to particular intersections. Thus in the role literature (28,30,31) there is reference to "subjective role", "group role", "cultural role", "public role", "private role" and so on.

Another common denominator highlighted by Thomas (30) is the fact most writers link role to position. In this respect they are following Linton's (18) influential treatise on role. Common to most conceptions is the idea that role refers to a "collectively recognized category of persons." However, the basis for categorization is diverse. It does however refer to individuals' common attributes such as their age, their common experiences (a trip overseas), the experiencing of common problems (establishing a young family) or common reactions of others toward them (those left-wing radicals). The link between role and position maintains Linton's original formulation. It also means role concepts provide a bridge into individual personality, attitudes and behaviour. According to Thomas "the concepts of position and role provide(d)

analytic means to connect social structural phenomena with individual behaviour."

Verner (34) is one of several writers who has used the notion of social role to highlight an important difference between pre-adult and adult education. He argues that social role is a way of identifying the responsibilities vested in individuals at various stages in life. Youth have some responsibilities; adults have others. The presence of these responsibilities creates a need for learning throughout life.

For an overwhelming majority of adults learning in a formal educational setting is secondary to behaviours associated with their primary role--usually that of producer, spouse, parent and citizen. For most children and adolescents the primary role is that of a learner in a formal educational setting--the school.

This shift in roles--from being a full-time to a part-time learner (in formal educational settings)--is the significant difference between an adult and a pre-adult. It provides the basis for a definition of adulthood. Verner (34: 29) states it thus:

> For purposes of adult education, at least, we can say, ... that an adult is a person who has come to that stage of life in which he has assumed responsibility for himself and usually for others, and who has concomitantly accepted a functionally productive role in the community.

There are situations that pose problems for this definition. In some Pacific Island and African societies six and seven year old "children" fish from canoes, hunt animals, and undertake tasks which in western societies would normally be the prerogative of adults. In countries such as Tanzania there are so few children in school and so many "children" performing "adult" duties that the core system of education is adult education. Ironically,

countries like Tanzania--who do not have a well-developed child education system--may become the first true learning societies. In western societies there are married part-time university students. They have come to the stage in their life where they accept responsibility for others and have a functionally productive role in society. If they attend classes organized by the Extension division of the university they would normally be regarded as being engaged in adult education. But if they participate in the regular 'internal' degree programme they would be more usually classified as engaged in higher education.

However, despite these problems, the notion of defining adulthood by reference to social role and associated behaviours is functional and has important implications for all steps of the adult education process. It means the social functions fulfilled by adult education are different to those fulfilled by pre-adult education, it has important implications for programme planning (which will be more tied to the learner's needs, roles and developmental tasks than in pre-adult education); it has implications for the design and management of instruction and the evaluation of learning in adult education.

Knowles (16) suggests there are four characteristics found in most adult learners. All pertain to both programme planning and the conduct of educational experiences for adults. Adults are purported to

i. Be more self-directed than pre-adults.

ii. Have a greater volume and variety of experience than children.

iii. Have their orientation and readiness to learn determined by the nature of their social roles and developmental tasks, all of which means they tend to

iv. Be problem-centred rather than subject-centred.

Knowles, Verner and others have for decades promoted the notion that both the functions and processes of adult education are not merely a linear extension of pre-adult education. In some respects their ideas are incompatible with those of people trying to promote "lifelong education" by emphasizing similarities and the desirability of dismantling boundaries between various components of the education system. This is no mere academic argument because in some countries adult educators are vigourously converting high schools into community schools which accept adults in day classes and then argue that their pupils are engaged in adult education. They are adults and are engaged in education. But not everyone would argue that the functions, programme planning and instructional management manifested by these schools constitutes adult education. A similar criticism can be levelled at many Adult Basic Education programmes in the United States. Some are certainly adult education; most are examples of youth education for adults. Probably the majority are not conducted in accord with good principles of adult education.

Transition From Pre-Adulthood to Adulthood

Despite the widespread acceptance of definitions of adult education which employ notions of social role there have been few attempts to study the psychological development of pre-adults and adults at the crucial point of transition--when a person first assumes responsibility for himself and others and accepts a functionally productive role in his community.

Some people successfully avoid these trappings of adulthood for a good time but for most people in western societies the change comes in the years immediately following high school. Proponents of recurrent education (20) argue that western societies should allow earlier entry into the work force

and the possibility of recurrent re-entry into educational activities throughout the lifespan. Although countries such as New Zealand have taken the first steps toward educational entitlement or paid educational leave, entry to adulthood--in terms of the definition described above--has hitherto occurred at about seventeen or eighteen years of age at the termination of high school. Could transition from pre-adulthood to adulthood be regarded as an instance of role discontinuity?

Role Discontinuity

Benedict (4) introduced this concept to characterize the lack of order or smooth sequencing in cultural role training throughout the life cycle. She described how so-called "primitive" cultures ensure continuity in training for sexuality, dominance and responsibility. Benedict suggested that the "storm and stress" purported to be associated with adolescence in urban western societies, although partly explicable by reference to physiological changes, is mostly caused by discontinuities resulting from prior role training.

Thomas (30) points out that although Benedict used this term to describe age-related transitions, discontinuities are involved in all sorts of transitions where differing role behaviours are required. The transitions associated with movements into positions such as "divorcee", "aged", "parent" and "retiree" are examples cited by Thomas which may involve discontinuity in varying degrees. In the present context, transition from pre-adulthood to adulthood may involve acquisition of attitudes which ease the discomfort of discontinuity. In this context it is pertinent to note that role discontinuity exists at a transition point when the behaviours or performances associated with the new role (being an adult --in the adult

education sense) necessitate the "unlearning" of attitudes acquired through many years of pre-adulthood.

Consideration of the extent to which attitude change occuring during transition from pre-adulthood to adulthood can be attributed to the roles (and associated behaviours) adopted by each individual broaches open another conceptual and definitional problem. Several writers in this area (e.g. Thomas, Sarbin) allude to the fact it is difficult to make viable distinctions between personality and role. In the context of the present investigation it is thus relevant to question the source of attitude change variance (for attitude change occurring during the pre-adult ... adult transition). This is basically a problem of explanation--is attitude change "caused" by role or personality factors? The question will not be examined further here because current definitions of adult education are clearly anchored in notions of social role. No author suggests that the roles of adulthood might have their own concomitant personality syndrome despite the fact Knowles argues that adults are more self-directed than pre-adults.

However, attempts in the research literature to explain attitude or behaviour variance that can be attributed to the occupancy of different social roles are not promising. Authors have examined the correlates of disability, unemployment, retirement, family changes and other diverse roles. It is difficult to summarise all the research undertaken so far but, in general, it appears that role occupancy does not account for much variance in the dependent variables studied. Perhaps a typical example is the study by Hill (15), cited by Thomas (30). Hill was interested in the discontinuity which follows membership loss in a family. He studied 139 families--examining

factors associated with adjustment to separation and reunion. His general conclusions were that the role factors did not have any detectable or strong influence on the dependent variables studied. Discussing this problem Thomas (30 :712) observes that "a mosaic of results (has) emerged, but this search for uniform, common effects was fruitless. In fact, the task of isolating reliable correlates ... turned out to be most difficult." The consensus appears to be that the effects of role discontinuity on a dependent variable are mediated by other variables which soften the impact. Researchers need to have regard to the abruptness of the transition, the amount of change, the type of learning and unlearning required as well as the reinforcers and benefits associated with the transition. Despite the fact previous researchers have generally been unable to attribute much variance in dependent variables to the influence of role occupancy, it is clear that the concept has utility for adult education. However, for the purposes of this study it was necessary to extend the hunt for clues as to the likely influence of adult roles on attitude change occurring during transition. One obvious place is in the theoretical formulations of the life cycle psychologists.

Identity Versus Role Confusion

There is no shortage of life cycle models which purport to explain aspects of the pre-adult ... adult transition. However, most models are so macrosopic and lacking in detail that they are not relevant to this study which focusses on attitude change occurring in a precisely delineated four-year period. Furthermore, models such as Havighurst's (13) "developmental tasks" or "dominant concerns" are culture-bound and somewhat dated. The psychological basis of Havighurst's model is sound but the specific content of the "developmental tasks" has not been adequately up-dated and thus has a mid-1950's sexist and conservative ring to it. The most useful analysis

for present purposes is Erikson's (11) description of the fifth stage in his eight stages of man. Erikson carefully restricts his analysis to a description of the psychological under-pinnings of behaviour and development. Although his model is strongly Freudian it is a durable and relevant analysis of human development which so far has lasted nearly twenty years.

Erikson does not attach chronological ages to his eight stages. However, the transition studied here would occur toward the end of the fifth and the beginning of the sixth stage. During the fifth stage Erikson (11 :261) says " ... the growing and developing youths, faced with this physiological revolution within them, and with tangible adult tasks ahead of them are now primarily concerned with ... the question of how to connect the roles and skills cultivated earlier with the occupational prototypes of the day." The "opportunities offered in social roles" during this stage enable the individual's ego to integrate the vicissitudes of the libido. In Freudian terms Erikson (11 :261) says " ... the sense of ego identity ... is the accrued confidence that the inner sameness and continuity prepared in the past are matched by the sameness and continuity of one's meaning for others, as evidenced in the tangible promise of a 'career.'" To Erikson a "career" at this stage is more than a place in the work world. It can also refer to other strong identifications or attachments that develop through overseas travel or behaviour associated with other roles. The key point of Erikson's fifth stage for present purposes is the fact that unsuccessful resolution of the tasks associated with the "ego identity" stage is the development of role confusion, or, in Benedict's terminology, role discontinuity.

Attitude-change: The Dependent Variable

One rationale for the selection of the dependent variable in this study was the suggestion that adults are more self-directed than pre-adults. A chief proponent of this view is Knowles (16 :39) who maintains that as a person matures "his self concept moves from one of being a dependent personality toward one of being a self-directed human being." This "characteristic" of adults has been widely accepted by adult educators and is the justification for placing the responsibility for learning on the learner and the use of activity-oriented experiential instructional techniques. However, the empirical foundations for this assertion are somewhat weak because reviews of self concept literature (39) do not contain much that could sustain it.

Another problem associated with the operationalisation of 'self-directedness' is the fact it's conceptual origins are obscure. Would a self-directed individual be a person who scores high on the 'internal' end of Rotter's (27) locus of control scale; would a self-directed person be the same as Riesman's (24) 'inner-directed personality'; would he be 'self-actualised' in Maslow's (19) or Rogers' (25) sense; or would he be 'field independent' when responding to Witkin's (38) rod and frame apparatus or the autokinetic phenomena ?

Because of conceptual ambiguity surrounding the notion of 'self-directedness' operational license must be permitted. Thus, in this study, an attitude measure previously shown to be correlated with self concept scores was used as the index of 'self-directedness.' Thus to examine the extent to which role occupancy is associated with psychological changes occurring during transition from pre-adulthood ... adulthood the dependent variable utilised was attitude change as measured by the Conservatism scale (36, 37). 'Conservatism' is a

particular characteristic or dimension of personality inferred from the organisation of attitudes. Conservatism is a general factor underlying the entire field of social attitudes much as a 'general' intellectual factor pervades specific abilities such as those measured in intelligence tests. This general attitudinal factor is manifested in personality as a cluster of highly inter-correlated attitudes. Prior to the development of the construct (36) it had been referred to in the popular and some scientific literature as "fascism", "rigidity", "dogmatism" and "authoritarianism." The term 'conservatism' is used now because it is more value-free than the earlier terms although the presence of Liberal and Conservative parties in Canada, Australia and Britain tends to obscure the fact that conservatism as used here is a psychological and not a political construct.

The 'ideal' conservative tends to insist on strict rules and punishments, to be militaristic, to be ethnocentric and intolerant of minority groups, to prefer conventional art, clothing and institutions, to favour an anti-hedonistic outlook and restrictions on sexual behaviour, to oppose scientific progress, and to be superstitious. This construct--and its instrumentation--was first developed in New Zealand by Wilson & Patterson (37) and co-workers such as Boshier (6, 7, 8, 9), Lillie (17), Thomas et.al. (32) and Webster & Stewart (35). Since the first form of the Conservatism scale (C-scale) appeared in 1968 it has been adopted by many researchers apprehensive about the possible contamination of F-scale (1) responses by acquiscence response bias (see Peabody (22,23) and the reply by Rorer (26)). The background to the development of the scale, data concerning reliability, validity and factor structure, and preliminary statements aimed at constructing a theory of

conservatism can be found elsewhere (2, 3, 7,36).

However, having regard to Knowles' statement concerning changes in the maturing person's self concept it is pertinent to recall in this context Bosher's (8) study which established a correlation of r = -.50 ($p < .001$) between self concept and conservatism scores. The respondents in this study were 40 New Zealand adult education students (mean age 26 years). The negative r between conservatism and self concept suggested that respondents who were high in self esteem (or have a "high" self concept) were significantly lower in conservatism than respondents with a "low" self esteem. Thus, conservatism scale scores--as used here--have concurrent validity with a self concept measure.

Traditionally, conservatism has suggested a preference for existing institutions, an attachment to tradition, moderation, caution and the resistance of all changes which do not increase the security of an individual or his society. Resistance to change and preference for traditional institutions are seen as two aspects of a general preference for "playing it safe." As Wilson (36: 13) explains:

> .... the conservative individual is prone to feel threatened and to experience insecurity in a complex and insecure environment and is therefore intolerant of change because it increases the complexity of the experiential world, i.e. the world is seen as falling apart.

Another interpretation of conservatism which has particular relevance to the transition from pre-adulthood to adulthood is the fact it represents the internalisation of "parental" prohibitions into a stable (perhaps inflexible) framework which anchors social behaviour and perceptual processes. In Freudian terms, the existence of a highly conservative disposition could be described as an

over-developed conscience or super-ego.

The Dynamics of Conservatism

Much of the early work on the conservatism construct dealt with the organisation (patterning) of attitudes. Factor analytic studies of the conservatism scale have revealed the existence of a general factor. In other words, if a person has conservative attitudes concerning say the death penalty there is a high probability that he is also conservative with respect to other (apparently) unrelated issues such as military drill, abortion and conventional clothing.

Although interesting, the organisation of social attitudes is less relevant to this study than the manner in which they are acquired. What are the processes, events or experiences that led some individuals to acquire conservative attitudes? For this study another relevant question is--what experience, role occupancy or historical events result in the adoption of a more (or less) conservative disposition when a "child" first leaves home and school to enter the adult world? In other words, do pre-adults become more or less self-directed (i.e. liberal--in the psychological sense) when they enter adulthood ? Also, what experiences or roles are associated with the development of greater (or lesser) self-directedness?

Developmental and Historical Time

Thus far discussion of the study problem has focussed on the possible effects of role occupancy on attitude change. But in any longitudinal study involving aging or transition from one role to another it is important to remember that as well as developmental time and developmental events there are other factors which have an impact on attitudes.

Change with the passage of time is not limited to individuals. Social collectivities (the peace movement), institutions (the church) and nations all change with time. As Bengston (5) observes, both historical and developmental time have meaning only as they mark the passage of events. In short, historical events have an impact on attitudes and behaviour. During the two data collection periods of this study (1970-1974) the world experienced the trauma of Watergate, the defeat of the United States at the hands of the Vietnamese National Liberation Front, numerous aircraft hi-jackings, the admission of China to the United Nations, International Court hearings against French nuclear testing in the atmosphere, the Skylab space project and, amongst other things, a series of devastating floods and earth-quakes. What effect would events such as these have on the age cohort studied here?

An age cohort is a group of people of approximately the same age. By definition, all were born in the same historical period. Thus the term "generational watershed" or "cohort effect" is used to describe the impact of historical events on any same-aged group. Because members of the same cohort have experienced both the same historical events and roughly similar developmental events one would expect them to have similar attitudes and behaviour. It was on this basis that we earlier attempted an analysis of the "generation-gap" using the 1970 data from this study (6). It was argued that inter-generational conflict in attitude can be accounted for by the fact each cohort "comes of age" in different eras. Their experiences with institutions and events will vary. Crisis (wars, depressions, exposure of corrupt government), sudden intellectual or technological advances (man

on the moon, television, the encounter movement), modifications in the social structure (the baby boom, urbanisation) force those "coming of age" to develop attitudes and behaviours which do not always resemble those of different cohorts. If historical events accounted for more variance in "adulthood" than role or other variables which adult educators say distinguish pre-adults from adults, then some fundamental principles of adult education would require revision.

Purposes of the Study

Specifically, this study concerned two questions:

1. If liberalism can be regarded as one manifestation of self-directedness, as described by Knowles, to what extent do pre-adults become more self-directed as they make the transition into adulthood?
2. To what extent is attitude-change occurring during transition from pre-adulthood to adulthood meaningfully related to the occupation of social roles (and concomitant experiences ?)

Thus the study was designed to examine the magnitude and nature of attitude change occurring during 1970-1974 and the effects of independent 'role' and 'experience' variables on any change detected. The attitudes studied here do not represent the full-blown psychological mosaic of pre-adult ... adult differences. But because of the general organisation of attitudes and the closeness of their relationship to other aspects of adult personality and behaviour, they are sufficiently central to warrant study.

METHOD

The population for this study consisted of 34 boy and 42 girl New Zealand high school students. They were first contacted in 1970 during a residential Volunteer Service Abroad (equivalent to the U.S. Peace Corps) selection course. Their age range was 17-19 years. They had a mean Otis I.Q. of 127 and, although they came from all parts of the country and had been selected to represent the full spectrum of social classes, it is not contended that they were a cross-section of New Zealand society.

As a first step in this study all respondents completed the modified Conservatism scale (9). They subsequently completed the scale a second time, on behalf of their mothers (mother estimates) and a third time on behalf of their fathers (father estimates). These data plus C-scale scores collected by mail from the real mothers and fathers formed the basis of an analysis of the so-called generation gap (6) and was used for a current affairs television show "Bridging the Gap" screened by the New Zealand Broadcasting Corporation in November, 1971.

Four years later, in 1974, the respondents were mailed another C-scale, identical to the one completed in 1970. Attached to the C-scale was a one-page questionnaire which elicited information concerning the outcome of their V.S.A. application, their work and other role occupancies from 1970 until 1974, their present occupation, formal education undertaken during the four year period and a description of "major activities or events .... that may have influenced your attitudes in recent years."

Because of the mobility of New Zealanders in this age cohort the questionnaire and stamped addressed envelope (for its return) was mailed to the parent's

address as recorded in 1970. A covering letter addressed to the parent(s) said that " .... nearly four years have elapsed and we are trying to re-contact all the 'children' who participated in the earlier survey. We want to find out if their attitudes have changed over the last four years." The letter then invited the parents to forward the questionnaire to their son or daughter who had applied to V.S.A. and participated in the earlier survey.

In the 1970 survey 87 per cent of the parents had responded to our letter within ten days of its mailing from Wellington. A further nine per cent had responded after a reminder by telephone making a total non-response rate of only four per cent which is far below that which other researchers have received in postal surveys (33:199). In view of the fact the children had probably left home during the four year period, we thought it desirable to contact them through their parents.

RESULTS

Response Rate

A 1974 response was elicited from 60 of the 1970 respondents. Of the 60 respondents, 37 were women and 23 were men. Thus, of the 16 non-respondents, eleven were men and five were women. In the 1974 follow-up responses were thus secured from 79 per cent of the population surveyed in 1970.

In survey research it is usually difficult to correct bias resulting from the differential characteristics of respondents and non-respondents. In this study we were fortunate to have the 1970 data for those who failed to respond in 1974 and thus able to compare them with respondents. On the major variable of interest (conservatism) the 60 respondents had obtained a mean C-score of 35.92; the twelve 1974 non-respondents had a mean score of 35.58

(four 'non-respondents' whose letters were returned as non-deliverable by the post office were eliminated from this analysis). Comparison of the mean 1970 C-scores of 1974 respondents and non-respondents showed they were not significantly different.

Social Roles and Behaviours During the Four Year Period

Of the 60 respondents 29 said they had not been overseas with V.S.A. during the four year period. Of the 31 (51.67 per cent) who had been overseas with V.S.A., four went to Papua/New Guinea, five to the Solomon Islands, four to Thailand, one to the New Hebrides, four to Fiji, eleven to Tonga and two to Samoa.

Most of the respondents had not worked in a fulltime occupation during the four year period. Thirty-five (58.33 per cent) had no years of work in the 'real world' (because they were at university), six said they had worked fulltime for one of the four years, nine had worked fulltime for two of the four years, and four had worked 'fulltime' for the entire four year period.

The 60 respondents were engaged in a variety of occupations at the time of the 1974 survey. Two were teachers/librarians (3.33 per cent of the respondent population), five were court officers or law clerks (8.33 per cent), four were technicians engaged in nursing, physiotherapy, community work, or film production (6.67 per cent), eight were employed as a soldier, forest worker, farm worker or earth moving contractor (13.33 per cent), 37 were involved in institutional education (e.g. university students), one was unemployed, and three were housewives (5.00 per cent of the population).

In 1970 this group were all in Form VI (Grade 12) at New Zealand high schools. By 1974, 21 of them were either married or involved in a major relationship ('shacked up'). Nineteen respondents were legally married.

Two were shacked-up; the remaining 39 were unmarried. Although nearly a third of the respondents had married within four years of leaving high school, 93.33 per cent of them had no children. One person had one child, and three people had two children. So the 60 respondents had, in the four year period, produced only seven children.

Of the 60 respondents, eight did not undertake further formal education after leaving high school, eleven had one additional year of formal education while 22 had three years. In all, the mean years of formal education in the four year period for the 60 respondents was 2.34 (S.D. = 1.40).

In the questionnaire provision was made for respondents to answer an open-ended question in which they were to "describe any major activities or events" that may have influenced attitudes over the four year period. Ten lines were ruled on the page for this purpose along with an instruction to "use the back of the page if necessary." Overall, the 60 respondents wrote an average of 7.81 lines (S.D. = 7.66) in response to this invitation. The magnitude of the standard deviation shows there was considerable variation in the amount written.

Responses to this question were rated as to their openness and "level of self disclosure." The "lines written" were coded as "not self disclosing at all", "mildly self disclosing" or "very self disclosing." It was difficult to develop coding criteria for this question but an inter-coder reliability coefficient of r = .89 indicated that sufficient precision was achieved. Nineteen respondents (31.67) were deemed to be not self disclosing at all , 30 were coded as providing responses which were mildly self disclosing and eleven were regarded as very self-disclosing.

The "influences" described in response to the open-ended question were content analysed to develop coding categories. The resultant analysis showed

that seven respondents (11.67 per cent) had regarded an intimate relationship with a friend or lover as a major activity which influenced attitudes in the four year period; five (8.33 per cent) said disillusionment with higher education had been an influence; six (10 per cent) said overseas travel had been an influence; two (3.33 per cent) said contact with Maori people and their culture had been an influence; three (5 per cent) said changed family circumstances (such as a break-up in their parents marriage) had been an influence; four (6.67 per cent) said joining a closed institution --such as the army or a religious order--had been an influence; thirteen (21.67 per cent) cited the positive effects of university as an influence; seven (11.67 per cent) mentioned leaving home as an influence. Other influences noted included the effects of contact with a philosophy (such as existentialism), the church or religious groups, work in voluntary agencies and social reform movements, marriage, unplanned pregnancy, moving to a rural environment, and contact with people in the business community. However, despite the variety of influences noted most people ascribed their attitudes to only one or two major sources. The mean total number of influences noted was 1.48 (S.D. = 1.44). However, this mean was suppressed because thirteen respondents (21 per cent) did not note any major influences while 24 (40.00 per cent) cited only one influence. Sixteen cited two influences, five respondents cited three influences, one cited four influences, and one cited five influences.

Whole-scale Conservatism Scores Over Four Years

The C-scale is scored on a scale which ranges from zero (extreme liberalism to 100 (extreme conservatism). The higher the score, the greater the conservatism. Table 1 shows the mean 1970 and 1974 C-scale scores on variables which, on an

a-priori basis should be related to the magnitude of change. The whole-scale discrepancy scores in this table were calculated by deriving a discrepancy score for each person on each item. Thus for each respondent, 50 item-discrepancy scores were summed--having regard to sign--to obtain a whole-scale discrepancy score.

Examination of the mean 1970 and 1974 C-scale scores reveals that the 60 respondents became more liberal during the four year period of the study. Men were more liberal than women in 1970 and 1974. Both men and women respondents became significantly more liberal during the four year period. However, the men's whole-scale discrepancy scores were greater than those of the women.

Table 1 also shows that respondents who went overseas with V.S.A. changed their attitudes more than those who did not go overseas with V.S.A. Respondents who did not do any "fulltime" work (probably because they were at university or engaged in other "higher" or "continuing" education) changed their attitudes (in the direction of liberalism) more than respondents who did 1-4 years of fulltime work during the period of the study. Similarly, changes in the C-scale scores of married (or 'shacked-up') respondents exceeded those of unmarried respondents.

INSERT TABLE 1

These data suggest that occupancy of important social roles (as a worker or a spouse, for example) is associated with attitude-change occurring during transition from pre-adulthood to adulthood. But because of inter-correlations between variables such as those listed in Table 1 their interactive effects

will be considered below. However, before considering the separate and interactive effects of the independent role and experience variables a question for immediate answer concerns the extent to which attitude change was specific or general. Both men and women became more liberal. Did this shift represent a general re-orientation of attitudes to many separate social issues or did the change in whole-scale scores occur because of massive change on just a few major attitudes? Conservatism or liberalism consists of a clustering of many apparently discrete social attitudes. Which of them changed; which remained the same? An ancillary question concerns the extent to which the change occurred as a function of maturational or role events or simply as a result of historical occurrences.

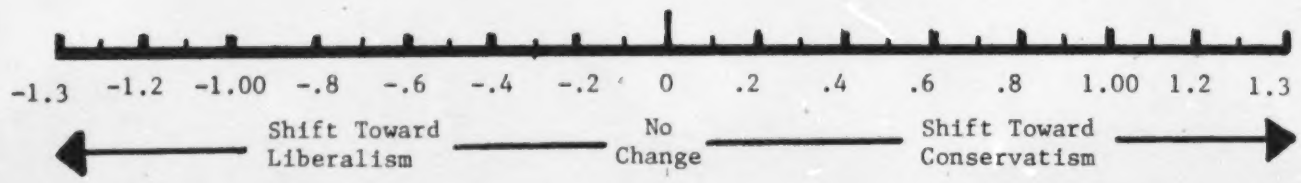
Was the Attitude Change General or Specific?

After calculating the change in whole-scale conservatism scores the four-year item discrepancies were examined in an attempt to discover issues or attitudes which accounted for the greatest amount of variance in the whole-scale scores.

Item-discrepancies were calculated as follows. In the C-scale a conservative response is scored 2, a liberal response is scored zero and a "?" is scored 1. The 1970 item responses were assembled on a coding sheet with the 1974 data string formatted in the same way on the next line. Below are five sample item responses and their discrepancy scores for one person.

Item	i	ii	iii	iv	v
1970	2	0	1	2	2
1974	0	2	1	2	1
D-score	-2	2	0	0	-1

On item 1, "death penalty" this person answered "yes" in 1970 which was the conservative response; he thus scored "2". In 1974 he answered "no" on this item and thus scored zero. On this item his attitude moved in a "liberal" direction. His D-score is -2 because the "death penalty" item score went down two points. However, in item two, "evolution theory", he was more conservative in 1974 than in 1970 so his score went up two points. On item three, "school uniforms", he checked the "?" on both occasions. Because there was no change in attitude his score was zero. The same applied to item four "striptease shows" except that he scored in the conservative direction on both occasions. However, his response to striptease shows did not change in the four year period. Note that 1970-1974 D-scores are a measure of change; they are not related to the amount of conservatism ... liberalism on an item, only to the magnitude of the change occurring during the four year period. "Plus" scores indicate a shift in a conservative direction; "minus" scores indicate a shift toward liberalism. The situation can be represented like this:



The overall trend was for the 60 respondents to become more liberal in the four year period so the D-score item means tend to be washed-out by zero-zero D-scores (which indicate liberalism on both occasions). However, despite this problem Table 2 shows the items where the shift toward conservatism and liberalism was greatest. The greatest downward change (i.e. toward liberalism) occurred with respect to striptease shows, beatniks, patriotism, masculine superiority, military drill, socialism, missionaries, security police, royalty, nudist camps, workers strikes and peacetime conscription. The greatest upward change (i.e. toward conservatism) occurred with respect to straitjackets and the death penalty.

INSERT TABLE 2

On each item a mean score greater than 1.00 indicates that more than 50 per cent of the respondents checked the conservative response on the item; a mean of less than 1.00 means that fewer than 50 per cent of respondents checked the conservative response. Thus, in 1970, more than three-quarters of the respondents said "yes" to licensing laws while less than one-quarter of them said "no" to modern art. The items are ordered so that an individual falling at an extreme end of the liberal ... conservative continuum would produce an alternating pattern of responses.

Cursory examination of the items upon which the greatest change had occurred did not reveal a psychologically meaningful pattern. Thus, in pursuit of any underlying meaning within the matrix of inter item correlations, several factor analyses were performed. The specific question examined through factor analysis of D-scores concerned the nature of the observed change in attitudes. Examination of the mean D-scores shows that change occurred with respect to some items but not others. Inter-correlation of the item D-scores showed the extent to which change (toward or away from liberalism) on one item was related to change on the other items. Thus, as an initial step a matrix showing the ten highest D-score inter-correlations was produced. Examination of this matrix suggested that change (up or down) was not specific to any one type (as per the previously identified factors of the C-scale--see Boshier (7) and Wilson (36))of attitude; the number of high and statistically significant inter-correlations between the D-scores suggested that general attitudes had changed during the four year period.

The C-scale was originally developed on the assumption that all social attitudes--religious, political, moral, artistic, scientific, etc.--would be to some extent correlated (this notion also guided development of the Adorno, et.al. (1) F-scale). The uni-dimensionality of the scale was to some extent ensured during item analysis used during its development. But the most compelling argument in support of a general factor theory of attitudes (i.e. the notion all attitudes are to some extent inter-correlated) emerged after principal components analysis of C-scale data from three cultures. Bagley, Wilson & Boshier (3) were responsible for the first of what is now a commonplace test of C-scale unidimensionality; they used data from England,

New Zealand and Holland and found that item-whole correlations were almost identical to loadings on the first unrotated factor in each of the three cultures.

Thus, to examine the extent to which change between 1970 and 1974 occurred on specific or general attitudes the matrix of D-score inter-correlations was factored. The loadings of each item D-score on the first unrotated factor are shown in the right-hand column of Table 2. The dominant feature of these results is the presence of a general factor in the D-score correlation matrix. Forty-six of the 50 items had positive factor loadings and were thus--in varying degrees--related to the general factor. Examination of the items which load significantly on this factor reveal that they represent a broad spectrum of attitudes. In other words, movement toward (or away) from liberalism on death penalty was correlated with movement on school uniforms, patriotism, military drill, co-education, and so on. Almost all the items load to some extent on the general factor. The top 22 which loaded .30 or greater are widely representative of the attitude areas represented in the C-scale and cover penal policy, youth-issues, militarism, religion, racism and worker organisations. Examination of the low loading items on this first unrotated factor reveals that they also do not represent any one content area; they only differ from the high loading items with respect to the degree change on them was related to the general factor. It is interesting to note that change on legalised abortion was not strongly related to the general factor. In New Zealand, as elsewhere, attitudes to abortion tend to cut-across political and attitudinal lines. Similarly, when the C-scale was originally developed, being against striptease shows was regarded as a manifestation of conservatism. But because the women's movement regards (female) striptease as exploitative, this item probably is longer related to general conservatism. It, like a few other items, had dated.[1]

The first unrotated factor accounted for 11.23 per cent of the variance. The sum of the squared factor loadings divided by the sum of the communalities on this factor was .14. Although the first unrotated factor demonstrated the existence of a general change factor in the D-score data it was decided to examine the problem from another perspective. Thus the matrix was orthogonally (varimax) rotated in such a way as to allow an unlimited number of factors. This rotation resulted in nineteen factors, most of which consisted of only one, two or three items. However, even with this very precise solution the first factor contained variables which represented several content areas in the scale (peacetime conscription .77; royalty .67; death penalty .63; workers strikes .58; military drill .56). Furthermore, the eigenvalues showed a sharp break between Factor II and III so it was decided to rotate a two factor solution. The resultant two factors both contained items representing all the C-scale content areas. All items had factor loading signs which showed they entered at least one of the two factors. The first factor had the following highest loading (.30 or greater) items: disarmament, mixed marriage, coloured immigration, co-education, student pranks, death penalty, chinese restaurants, birching, white superiority, women judges, trade unions, welfare legislation, nudist camps, cousin marriage, divorce, beatniks , school uniforms. The second factor had the following highest loading (.30 or greater) items: royalty, workers strikes, censorship, missionaries, peacetime conscription, licensing laws, divine law, patriotism, strict rules, sabbath observance, military drill, bible truth, jazz, apartheid, austere prisons. An oblique rotation would have shown the extent of the inter-correlation between these factors but as both the orthogonal rotation and the first

unrotated factor had adequately illustrated that attitude change in the four year period was general rather than specific it was not deemed necessary to continue the factoring process.

Independent Variable Interactions

To examine the extent to which attitude-change over the four year period was related to the separate and interactive effects of the role and experience variables 25 independent variables were readied for entry into a regression equation. Examination of the correlation matrix created prior to the regression analysis showed that whole-scale discrepancy scores were most significantly correlated with church/religion influences ($r = .38$, $p < .01$ - two-tailed test). For each independent variable to enter the regression equation it had to explain at least an additional five per cent of the variance. With this criterion the equation terminated after two steps. At the first step the r^2 was .17; at the second step the r^2 increased to .30($p < .01$). The variables which had the most powerful effects were the influences of marriage ($F = 3.40$, $p < .06$), the church ($F = 9.37$, $p < .01$), lover , years of fulltime work and years of post-secondary education.

Although this regression analysis had revealed significant relationships between the independent and dependent variables it was not entirely satisfactory because seventeen of the 25 independent variables were dichotomous. Also, regression analysis has other restrictions pertinent to the present problem. Among these is the fact predictors have an effect measured over the entire data set. The aim of regression is to account for variance in the dependent

variable. But in regression all effects--main or interactive--are measured over the entire population. Regression thus assumes what is sometimes untrue. Another problem relates to the fact most of the independent variables were dichotomous. Hays (14) Guildford (12) and others have argued that Pearson product-moment correlations may be performed on dichotomous variables providing some order is implied. However, other writers have different attitudes to this problem.

In the present circumstance there was no need to consider this question because an alternative and more suitable analytic strategy was available. The AID 3 (Automatic Interaction Detector) option in OSIRIS[2] is peculiarly suited to analysis involving many dichotomous variables and provides a powerful logarithm to handle problems which might otherwise encounter what Sonquist et.al. (29) term the "restrictive assumptions of multiple regression and the cumbersome inconvenience of ransacking sets of data in other ways."

The heart of AID3 is an ability to search among a set of predictors for characteristics which increase the researcher's ability to account for variance in the dependent variable. Each predictor is split dichotomously in a manner which maximises the variance accounted for. As Sonquist et.al. (29) explain " ... the question 'what dichotomous split on which single predictor variable will give us a maximum improvement in our ability to predict values of the dependent variable?' embedded in an iterative scheme is the basis of the algorithm used." The population is divided, through a series of binary splits, into a mutually exclusive series of subgroups. Every observation is a member of one of the sub-groups. Each group is chosen so that at each step the two new means account for more of the total sum of squares (reducing the predictive error) than the means of any other sub-groups. For present purposes, the important feature is the fact the dependent variables may be

nominal or ordinal. The dependent variable (conservatism-discrepancies) must be continuous--although a dichotomy which is not overly one-sided may also be used.

The AID3 analysis is not like factor or regression analyses. In social research main effects are not necessarily the same or even present in all parts of a population or sample. Furthermore, interaction effects may be of complex kinds affecting only some sub-groups in the population. This is typical of problems encountered in adult education research. Using large letters on visual aids may have insignificant effects on the learning of general populations but it may have crucial and powerful effects on a relevant sub-group--old people for example. AID3 reveals these sub-group effects and is well-suited to exploratory research where inter-relationships within a model are not exactly specified. AID3 formalises and makes explicit explorations in data so they can be judged, repeated, and tested on other populations and samples. It also enables the researcher to dismiss predictors that don't effect the dependent variable. With an additive regression model the researcher is never sure if a variable might matter for a sub-group of the population. However, if the variable cannot account for reasonable amounts of variance for the entire population or for any of the various sub-groups then it can be dismissed.

INSERT FIGURE 1

AID output is printed as a tree showing the various sub-groupings and the variance they account for. At each step AID3 tries to split the available

independent variables. With variables that contain more than two categories it searches for the best dichotomous split. In Figure 1 the tree resulting from the present analysis shows that at the first step the variable which resulted in the greatest reduction in predictive error was the influence of church/religion. Note that respondents who indicated they had been influenced by a church or religion had a mean discrepancy score of -9.09. This split accounted for 15.2 per cent of the variance. Respondents who were not influenced by church/religion and who had 2-5 years of post-secondary education had a mean discrepancy score of -11.57 whereas those who were not influenced by church/religion and had only 0-1 years of post-secondary education had a mean discrepancy score of -4.52. AID3 thus works like a sieve.

Overall, the 21 groups accounted for nearly 50 per cent of the variance in the dependent variable. But within the tree several branches are discernible. Respondents who did not cite religious influences, had 2-5 years of education, did not cite the influence of an intimate relationship or lover, did not cite the influence of marriage, did no years of fulltime work in the four year period, wrote 0-7 lines in response to the open-ended question concerning "influences" (or 0-2 lines) generally moved toward liberalism to a greater degree than respondents manifesting other combinations of variables. Another branch consisted of respondents who did not cite church/religion as an influence, had 2-5 years post-secondary education and cited the influence of an intimate relationship or lover and had, at each step, discrepancy scores which were below the overall dependent variable mean.

Another branch consisted of respondents who did not cite church/religion as an influence, had 0-1 years of post-secondary education, reported doing 2-4 years of fulltime work during the period of the study, and cited marriage

as a determinant of their attitudes. Respondents still left at the end of this branch had a mean discrepancy score of -15.00 which is considerably lower than the overall mean (-7.43) indicating a greater shift toward liberalism. Of respondents on this branch who did not cite marriage as an influence, those who went overseas with V.S.A. made a greater shift toward liberalism than those who did not go overseas with V.S.A.

In interpreting this tree it must be remembered that it shows the ways in which variables interact. Variables can have different effects in different branches. For example, group 12, which consists of 21 respondents who reported that they did no years of fulltime work, had a mean discrepancy score of -9.85. But group 11, which consisted of six respondents who said they did 0-1 years of fulltime work had a mean discrepancy score of 1.66. At first glance it might appear that there is something wrong with this analysis. But it must be re-called that in group 12 the effects of church/religion, 0-1 years of education, a lover and marriage have already been removed. Group 11 certainly did only a small amount of fulltime work in the four year period. But they also had only 0-1 years of post-secondary education and did not report any church/religion influences. The percentage figure shown at each partition point represents the between sum of squares (for that split) divided by the total sum of squares multiplied by 100. It can regarded as index of the per cent of variance accounted for by each partition.

DISCUSSION AND SUMMARY

This study stemmed from the fact that adults occupy social roles different to those associated with pre-adulthood. The occupancy of adult social roles is purported to have important implications for adult education processes such as programme planning and the design and management of instruction. A

characteristic of adult learners related to the occupancy of adult roles is the fact they are supposed to be more self-directed than pre-adults.

This study was designed to investigate this and other questions. There are difficulties associated with operationalizing what Knowles meant by self-directed ; in this study conservatism ... liberalism scores were assumed to be one manifestation of self-directedness. This assumption was based on Wilson's dynamic theory of conservatism and the construct validation of the C-scale (36). If this assumption is correct then this study has shown that adulthood is accompanied by significantly higher levels of self-directedness than pre-adulthood. This result is derived from a longitudinal rather than a cross-sectional study. In this sense, the hypothesis suggested by Knowles--that adults are more self-directed than pre-adults--was confirmed with this group of 60 New Zealanders.

A second question concerned the extent to which attitude-change was general or specific. This was investigated through factor analysis of 1970 - 1974 C-Scale discrepancy scores. An alternative strategy would have been to study the change in factor scores over time; this was rejected because successive rotation of C-scale factor matrices has yielded mixed results which probably stem from the fact the underlying theory (and possibly the reality) which guided construction of the scale is that attitudes are inter-correlated.

Furthermore, an item-by-item analysis over time yields very specific measures of change on single attitudes. Inter-correlation and factor analysis of these item discrepancies shows the extent to which change on one item (e.g. death penalty) is accompanied by change on other items. From another perspective it may also be asserted that change on apparently unrelated items (such as birth control, military drill and electronic music) is more interesting and suggestive than change in factor scores. Factor analysis of the 50 item-

discrepancies suggested that changes over the four year period were general. Nearly half of the items loaded greater than .30 on the first unrotated factor. Previous factoring of the C-scale have shown that loadings on the first unrotated factor strongly resemble item X whole correlations. In this case loadings on the first unrotated factor derived from item-discrepancies would strongly resemble the item-discrepancy X whole-scale discrepancy correlations. Only four items had negative loadings on the first unrotated factor. Because the high loading items on this factor represented almost all the issues and attitudes contained in the C-scale it appears that change in the whole-scale C-scores (-7.43) was due to general attitude change.

Another question considered concerned the extent to which change occurred as a function of role occupancy. This was investigated by running a regression-type analysis which was suitable for a situation where many of the independent variables were dichotomous. Adult-oriented role variables (such as marriage and work) and additional variables that were cited as attitude "influences" entered the analysis and ended up accounting for nearly 50 per cent of the variance in the dependent variable (attitude-change scores). Attitudes are only one part of the total social and psychological mosaic of adulthood. However, the analysis does support the fact that occupancy of adult roles (and the concomitant exposure to adult experiences and influences) is associated with attitude change. However, it is ironical that respondents who showed the greatest shift toward self-directedness (liberalism, in the psychological sense) were those who largely avoided roles and circumstances that, on an a-priori basis would be expected to engender self-directedness. Respondents whose attitude scores showed the greatest shift toward liberalism had spent most of the four year period in the shelter of educational institutions, and were thus not exposed to any great degree to the world of work; they said

they were not influenced by marriage or intimate relationships such as with a lover and tended to report a smaller number of influences (as shown in the lines written) than respondents who manifested a smaller shift toward liberalism. Unfortunately, there were some variables which failed to enter this analysis because there were only 60 subjects in the study. Certainly, this aspect of the investigation requires replication with a larger population that does not contain such a high proportion of university students. However, in any replication the longitudinal design and the AID3 analysis should be retained.

In view of the fact so few influences were cited by respondents the fact nearly 50 per cent of the variance was accounted for is notable. However, the fact the attitude change was general rather than specific suggests that the remaining 50 per cent of the variance is due to influences that had a pervasive and general effect on all attitudes. Our conjecture is that the other 50 per cent of the variance can largely be attributed to the effect of historical events. In 1972 New Zealand witnessed the demise of a Conservative (National) Party government that had held office for 23 years. In 1972 a Labour Party government was elected. In 1972 and 1973 New Zealand activists dispatched a 'peace fleet' of yachts to physically impede the testing of nuclear weapons at Mururoa atoll ; the government sent a naval vessel to protest the tests. Elsewhere in the Pacific but widely reported in New Zealand was the C.I.A. assisted overthrow of the Allende government in Chile (1973). Also influential was the United Nations Conference on the Environment held in Stockholm in 1972, Watergate prosecutions which began in July 1973, the expulsion of 8000 Asians from Uganda in August 1972, the continuing Irish Civil War, the explosion of nuclear devices by India and China, an inabilility of governments to deal with inflation, the Munich Olympic Games, the cuts in oil production, the so-called energy 'crisis' and the Commonwealth Games in

Christchurch, New Zealand (January, 1974). Other less dramatic local, national and international events no doubt also influenced attitudes during this period. But without a major study we are unable to asertain the extent to which historical events influenced conservatism scores. However, in view of the fact there was a landslide victory for the Conservative (National) Party in 1975 which reflected a major swing to the political right,[3] it appears that the attitudes of the 60 subjects studied here were moving in the opposite direction to those of the general (voting) population.

From an adult education perspective this study has shown that the psychology of pre-adults and adults changes during transition. It appears that definitions of adult which invoke notions of social role as the central explanatory construct are well-founded. If adult education is supposed to consist of concepts and processes which are somehow different to those utilised by pre-adult educators then studies focussing on purported differences are needed. This study used a methodology that could be easily replicated elsewhere. Other studies might account for additional variance in dependent variables by attending more closely to the possible effects of independent 'role' variables which were not included here. At present it appears that roles (and their associated experiences) account for about 50 per cent of the variance in attitude-change; historical events might account for the other 50 per cent. However a more systematic identification of independent role variables may result in a configuration which accounts for significantly more variance than obtained here.

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FOOTNOTES

1 A difficulty associated with the development of attitude scales is the fact items become obsolete quite rapidly. The C-scale was first developed in 1968. In 1970 when the present study began beatniks and hippies were a current phenomena. By 1974 this and other issues had faded. However, we heeded Campbell & Stanley's (10) advice concerning this problem and administered the C-scale in 1974 in the exact form it was used in 1970.

2 Thanks are due to Teresa Tenisci, Statistical Analyst in the U.B.C. Computing Centre for assistance with the job set-up for this analysis.

3 The election of the New Zealand National Government in 1975 led to the resumption of football tours to South Africa which in turn led to the Black African boycott of New Zealand at the 1976 Montreal Olympic Games. Other manifestations of a swing to the political right was the fact the government permitted nuclear-powered warships from other nations into New Zealand ports (the previous Labour government had prevented this), the voting down of a bill designed to ease the plight of homosexuals and the levying of punitive taxes against 'luxury' items such as colour television sets, outboard motors, and overseas travel.

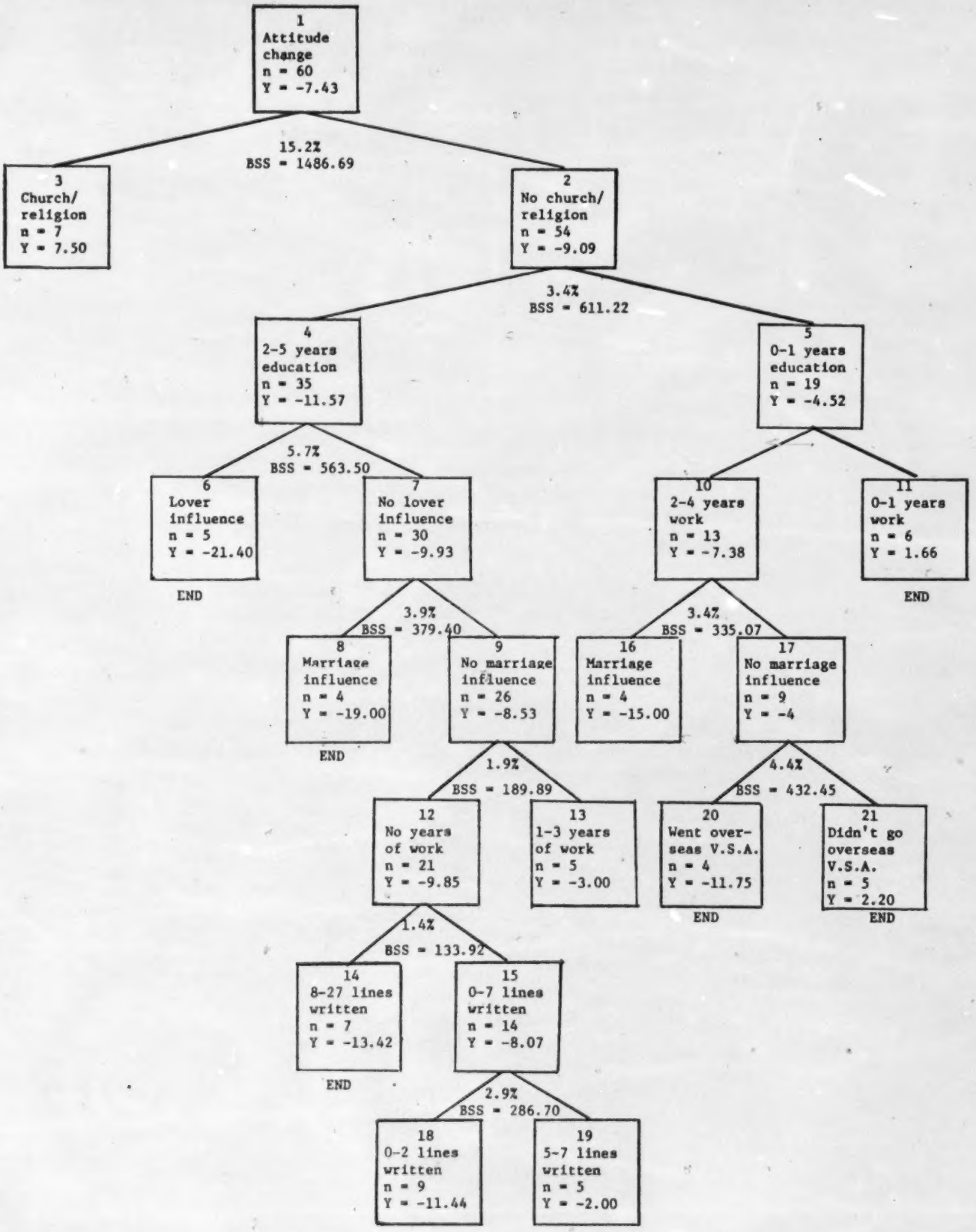

Figure 1. 'Tree' Showing the Effects of Role Occupancy and Experience on Attitude Change Over Four Years.

TABLE 1

MEAN 1970 AND 1974 CONSERVATISM SCORES FOR SIXTY RESPONDENTS SEPARATED ON SOCIAL AND SOCIAL ROLE VARIABLES

	1970 Mean*	1970 S.D.	1974 Mean	1974 S.D.	1970-1974 Whole-Scale Discrepancy	Discrepancy Score S.D.	t- Value
Study Population	34.78	11.15	26.93	14.21	-7.43	12.88	-3.37
Women (n = 37)	36.51	11.26	29.45	12.45	-6.37	12.35	-2.56
Men (n = 23)	31.99	10.61	22.86	16.11	-9.13	13.81	-2.27
Didn't go overseas with V.S.A. (n = 29)	34.79	12.20	28.75	14.53	-5.24	12.63	-1.72
Did go overseas with V.S.A. (n = 31)	34.77	10.27	25.22	13.91	-9.48	12.98	-3.08
No years of work (n = 35)	34.22	11.44	25.08	12.87	-9.14	12.90	-3.14
1-4 years of work (n = 25)	35.55	10.90	29.51	15.80	-5.04	12.73	-1.57
Unmarried (n = 39)	34.71	11.85	27.51	15.88	-6.61	12.91	-2.27
Married/Shacked-Up (n = 21)	34.90	9.98	25.85	10.70	-8.95	13.01	-2.84

* Only data from respondents who completed the C-scale on both occasions is included here. Hence the slight discrepancy between these means and those in the earlier analysis of the 1970 data (6).

TABLE 2

MEAN 1970 AND 1974 CONSERVATISM SCALE ITEM SCORES, S.D.'S, 1970-1974
ITEM DISCREPANCY SCORES, AND DISCREPANCY SCORE FACTOR LOADINGS FOR SIXTY YOUNG ADULTS

Item	1970 Mean	1970 S.D.	1974 Mean	1974 S.D.	1970/74 D-score Means	1970/74 D-score S.D.	D-score Variance	Loading of D-score on first unrotated factor
Death Penalty	.38	.78	.45	.81	.15	.87	.76	.54*
Evolution Theory	.20	.57	.28	.66	.12	.67	.45	.10
School Uniforms	1.30	.95	.96	1.00	-.25	1.25	1.56	.39*
Striptease shows	1.05	.95	.71	.90	-.41	1.13	1.29	-.06
Sabbath Observance	1.09	.97	1.08	.96	.01	1.05	1.10	.12
Beatniks	.68	.82	.38	.69	-.32	1.04	1.10	.27
Patriotism	1.53	.84	1.21	.90	-.32	1.06	1.13	.38*
Modern Art	.20	.57	.25	.62	.06	.64	.41	.20
Self Denial	1.30	.91	1.40	.88	.01	1.06	1.14	.14
Working mothers	.63	.91	.46	.76	-.15	.98	.97	.27
Masculine Superiority	.93	.98	.28	.69	-.67	.96	.92	.22
Birth Control	.25	.66	.10	.43	-.13	.47	.22	.18
Military Drill	.84	.95	.53	.85	-.44	.95	.91	.57*
Co-education	.12	.46	.03	.25	-.03	.59	.34	.32*
Divine Law	.91	.90	.81	.94	-.12	1.01	1.02	-.07
Socialism	.79	.93	.55	.81	-.37	1.10	1.22	.30*
White Superiority	.03	.23	.08	.38	.08	.46	.22	.19
Cousin Marriage	1.08	.96	.95	.92	-.06	1.13	1.29	.27
Missionaries	1.34	.90	.98	.92	-.39	1.18	1.40	.39*
Student Demonstrators	.38	.75	.35	.68	-.05	.84	.71	.22
Security Police	1.21	.94	.80	.43	-.44	.93	.88	-.02
Legalised Abortion	.96	.97	.70	.86	-.10	.87	.76	-.02
Empire Building	.46	.79	.30	.69	-.08	.88	.78	.22
Student Pranks	.51	.84	.48	.81	.10	1.05	1.11	.28
Licensing Laws	1.59	.80	1.41	.88	-.27	1.23	1.53	.29
Electronic Music	.37	.78	.25	.65	-.05	.92	.85	.09
Chastity	1.35	.92	.90	.93	-.46	1.28	1.65	.29
Fluoridation	.33	.72	.35	.73	.10	.69	.48	.05
Royalty	1.10	.97	.90	.93	-.37	1.10	1.22	.60*
Women Judges	.18	.58	.16	.55	.03	.87	.77	.29
Conventional Clothing	.97	.97	1.13	.87	.10	1.11	1.25	.08
Trade Unions	.72	.92	.53	.79	-.17	1.20	1.44	.41*
Apartheid	.20	.57	.20	.57	.03	.64	.41	.34*
Nudist Camps	.37	.92	.23	.62	-.51	.97	.95	.37*
Church Authority	.74	.88	.51	.81	-.22	.85	.73	.23
Disarmament	.26	.66	.16	.52	-.01	.82	.68	.54*
Censorship	.99	.99	.88	.94	-.18	[illegible]	1.34	.45*
Workers Strikes	1.09	.98	.76	.90	-.37	1.22	1.50	.65*
Birching	.43	.81	.26	.66	-.08	.77	.60	.41*
Mixed Marriage	.15	.51	.10	.43	-.17	.76	.57	.44*
Strict Rules	.59	.88	.70	.86	.06	1.13	1.29	.14
Jazz	.51	.86	.38	.78	-.20	1.00	1.00	.26
Straitjackets	.55	.81	.75	.89	.27	.95	.90	.38*
Chinese Restaurants	.12	.40	.06	36	-.08	.60	.36	.51*
Peacetime Conscription	78	.97	.23	.42	-.50	.94	.88	.53*
Divorce	.58	.88	.45	.79	-.05	.92	.85	.30*
Austere Prisons	.50	.83	.50	.85	-.05	.96	.92	.12
Coloured Immigration	.25	.63	.25	.62	.01	.92	.85	.48*
Bible Truth	.90	.93	.75	.91	-.22	1.07	1.15	.11
Welfare Legislation	.10	.45	.10	.39	-.01	.60	.36	.32*

* Factor loadings greater than or equal to .30.